opposite directions, as indicated by the arrows, to pull the device **301** with the laminates thereon through the rollers.

As the device is pulled through the rollers, the laminates are heated and compressed onto the surfaces of the device. The pressure exerted by the rollers should be sufficient to facilitate sealing without crushing or damaging the device. Typically, the pressure exerted by the rollers is about 1–500 kN/m^2. The laminates are heated to a temperature above the activation temperature of the sealant. The process temperature should be maintained as low as possible, for example, slightly above the sealant's activation temperature. The speed of the rollers can be adjusted to ensure complete sealing of the laminates onto the device.

Referring to FIG. **5**, after the device is pulled through the rollers, the encapsulation process is completed to form the device **500** as shown. The present invention, as described, performs encapsulation of the device in an environment free of any evaporable chemicals. This is advantageous as the possibility of corrosion of the active components from chemicals are avoided, thereby improving yields. Further, the encapsulation process can be modified to provide continuous and parallel processing to increase throughput and decrease raw process time. For example, large laminates can be used to sandwich a plurality of devices therebetween. The laminates than are processed through the rollers, encapsulating a plurality of devices. The devices can then be separated after encapsulation.

While the invention has been particularly shown and described with reference to various embodiments, it will be recognized by those skilled in the art that modifications and changes may be made to the present invention without departing from the spirit and scope thereof. The scope of the invention should therefore be determined not with reference to the above description but with reference to the appended claims along with their full scope of equivalents.

What is claimed is:

1. A device comprising:

a substrate;

at least two active components formed on a top surface of the substrate;

at least one non-active region separating the active components;

a first laminate over the top surface of the substrate, encapsulating at least the active components, the first laminate including a barrier layer and a protective layer formed on a plastic film, wherein the barrier layer is closer to the active components than the plastic film and the plastic film is between the barrier layer and the protective layer, the barrier layer is capable of inhibiting diffusion of air or moisture and the protective layer includes a polymeric resin and forms a hard coat; and

at least one support post in the non-active region, providing support for said first laminate.

2. The device of claim **1** wherein the active components comprise organic light emitting diode devices.

3. The device of claim **2** wherein the substrate supports the active components.

4. The device of claim **3** wherein the substrate comprises a flexible substrate.

5. The device of claim **4** wherein the substrate comprises a substrate material selected from the group of materials consisting of polymer, glass, ceramic, and semiconductor material.

6. The device of claim **3** wherein the substrate comprises a transparent substrate.

7. The device of claim **6** wherein the substrate includes a material selected from a polymer or glass.

8. The device of claim **3** wherein the substrate comprises a flexible transparent substrate.

9. The device of claim **8** wherein the substrate comprises a material selected from a polymer or glass.

10. The device of claim **1** wherein the substrate supports the active components.

11. The device of claim **10** wherein the substrate comprises a flexible substrate.

12. The device of claim **11** wherein the substrate material is selected from the group of materials consisting of polymer, glass, ceramic, and semiconductor material.

13. The device of claim **10** wherein the substrate comprises a transparent substrate.

14. The device of claim **13** wherein the substrate material includes a material selected from a polymer or glass.

15. The device of claim **10** wherein the substrate comprises a flexible transparent substrate.

16. The device of claim **15** wherein the substrate comprises a material selected from a polymer or glass.

17. The device of claim **13** or **14** further comprising a second laminate on a bottom surface of the substrate, wherein the second laminate comprises a transparent laminate.

18. The device of claim **17** wherein the first and second laminates comprise:

a laminate substrate; and

a sealant on a surface of the laminate substrate that contacts the support post or the substrate.

19. The device of claim **18** wherein the laminate substrate comprises a material having a sufficient thermal stability to maintain mechanical integrity during a laminating process.

20. The device of claim **19**, wherein the plastic laminate substrate is selected from poly (ethylene terephthalate), poly (butylene terephthalate), poly (enthylene naphthalate), polycarbonate, polyimides, polysulfones, poly (p-phenylene ether sulfone), polyethylene, polypropylene, poly(vinyl chloride), polystyrene, or poly (methyl methyleacrylate).

21. The device of claim **20** wherein the sealant flows at an activation temperature which causes sealing between the laminate substrate and the support post or substrate.

22. The device of claim **21** wherein the activation temperature is between 80° C. and 140° C.

23. The device of claim **22** wherein the first and second laminates comprise a barrier layer, wherein the barrier layer inhibits the diffusion of air or moisture.

24. The device of claim **23** wherein the barrier layer comprises a material selected from a group consisting of a metallic and a dielectric material.

25. The device of claim **24** wherein the metallic material comprises copper or aluminum and the dielectric material comprises silicon monoxide, silicon oxide, silicon dioxide, silicon nitride (Si_2N_4), or a metal oxide.

26. The device of claim **25** wherein the sealant flows at an activation temperature which causes sealing between the laminate substrate and the support post or substrate.

27. The device of claim **26** wherein the activation temperature is between 80° C. and 140° C.

28. The device of claim **18** wherein the second laminate comprises a barrier layer that inhibits the diffusion of air or moisture.

29. The device of claim **28** wherein the barrier layer includes a metallic or dielectric material.

30. The device of claim **10** further comprising a second laminate on a bottom surface of the substrate.

31. The device of claim **30** wherein said first and second laminates comprise:

a laminate substrate; and